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ABSTRACT

This study examined the relationship between maternal stress, changes in stress, specific stressors, and social support and quality of mother-infant attachment. Life stress of 132 mothers was assessed prenatally and when the child was 13 months old. The mothers' social support and the quality of infant-mother attachment were also measured at the child's 13th month, the latter by means of the Ainsworth Strange Situation procedure. Results indicated that high stress at 13 months, and an increase in stress from the prenatal period to 13 months, were associated with infants' anxious-resistant attachment in the strange situation. Partner stress, and stress related to changes in family relationships, differed significantly depending on attachment classification in the strange situation. Among mothers who reported low social support, there were no significant differences between the level of stress of mothers whose infants exhibited anxious-resistant attachment in the strange situation, and the stress of mothers whose infants exhibited anxious-avoidant or secure attachment. Eight references are cited. (BC)

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THE RELATIONSHIP BETWEEN MATERNAL LIFE STRESS AND SOCIAL SUPPORT AND QUALITY OF MOTHER-INFANT ATTACHMENT

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ABSTRACT

The purpose of this study was to examine the relationship between maternal life stress, changes in stress, specific stressors, and social support and quality of mother-infant attachment. A sample of 132 high-risk women were administered a 40-item life events scale, a social support measure, and along with their 13-month old infants, were assessed for quality of attachment in the strange situation. Results indicate that high stress at 13 months, and an increase in stress from the prenatal to 13 month period, was associated with anxious-resistant (C) attachment. Stress related to the mothers' close interpersonal relationships, such as loss stress, partner stress, and stress related to changes in family relationships, was of particular significance. Only for low levels of social support was there a relationship between stress and attachment. This suggests that the presence of social support moderated the effect of stress on attachment.

INTRODUCTION

Differences in quality of attachment have been shown to relate to differences in maternal sensitivity and responsiveness. An important question then is why some mothers are sensitive and responsive and others are not. One hypothesis is that mothers who experience high stress, possibly particular types of stress, may find it difficult to be consistently available and responsive to their infants. Therefore these mothers and infants might be more susceptible to forming anxious attachments. Yet mothers who experience high social support along with high stress may be better able to meet their infants' needs, thus facilitating secure attachments.

Only a few studies have investigated the relationship between maternal stress and quality of attachment and only one has in addition considered the role of social support as a possible moderating influence. Vaughn, Egeland, Sroufe & Waters (1979) found that at 18 months, but not at 12 months, mothers of anxiously attached infants reported more stress than mothers of secure infants; futhermore, changes from secure to anxious attachment from 12 to 18 months were associated with increases in stress over that period. Although for this sample there were no overall significant differences in stress found by avoidant (A), secure (B), or resistant (C) attachment, mothers of C girls reported significantly more stress at 12 months than mothers of A or B girls (Egeland & Farber, 1984). With respect to the role of social support, Crockenberg (1981), using a sample of intact middle class and working class families, found that mothers who reported more stress than support and had a highly irritable infant were more likely to have an anxious attachment with their infant.

The current study extends this body of research in several important ways. First, since changes in maternal life stress have been associated with changes in attachment classification over time, we investigate the relationship between changes in stress from the period before birth to the period after birth and the development of the intial attachment relationship. Second, since life stress is thought to be a multi-dimensional factor, we investigate the relationship between particular life events or types of life events and attachment. Third, we investigate whether social support moderates the relationship between stress and quality of attachment for high-risk families.

METHOD

Subjects

The sample includes 132 mothers and their first born children. The mothers are at least 17 years old (M=20), have no more than a high school education (M=11), and are on medical assistance or are poor and uninsured. Fifty-six percent are White, 41% are Black, and 3% are from other minority groups.

Measures and Procedure

Maternal life stress was assessed prenatally and when the infant was 13 months using the Life Events Scale (Egeland & Deinard, 1975). This scale is based on Cochrane and Robertson's Life Events Inventory (1973) and was adapted for use

with a low-SES population. It contains 40 items concerning stress related to work, family & neighbors, finances, violence, health, and involvement with the law. Eleven subscales group items of similar content and measure specific types of stressors. At each assessment period, mothers were interviewed about stressful events occurring within the past 12 months. Each event item was later scored on a 3-point scale for the degree of disruptiveness to family functioning. Disruptiveness was based on the frequency of occurrence of the stressful event during the past year and on how close a relationship the mother had with the person involved. Inter-rater agreement was 85% for the prenatal interview, and 92% for the 13 month interview.

Social support was measured at 13 months using the Inventory of Parent's Experiences (Beckwith, personal communication). This 12-item self-report measure assesses both level of and satisfaction with support and yields separate scores for overall level of support, satisfaction with support, community support, friendship support, and intimate support.

Quality of infant-mother attachment was assessed at 13 months using the strange situation procedure (Ainsworth, Blehar, Waters, & Wall, 1978). This procedure consists of eight episodes involving the mother, the infant, and a stranger. The stranger and mother alternatively leave and return to the infant in a set order. Infants were assigned to an attachment classification based on their use of mother as a secure base from which to explore and their ability to be comforted by the mother's presence. Group A infants were classified as anxious-avoidant ($n = 21$) (behave similarly towards mom and stranger and actively avoid or ignore mom upon reunion), group B were secure ($n = 100$) (explore in mom's presence and actively seek contact with mom upon reunion), and group C were anxious-resistant ($n = 11$) (exploratory behavior is limited, are very distressed by separation, and are unable to be comforted upon reunion, often showing anger and active resistance to contact). Videotaped records of the strange situations were scored independently by two trained coders for a reliability of 80%, and all disagreements were conferenced to reach 100% agreement. Strange situations are currently being coded for the D classification (anxious-disorganized). We expect that a number of the infants classified as B will be re-classified as D.

RESULTS

What is the relationship between maternal life stress and quality of attachment? Are changes in stress from the period before birth to the period after birth related to quality of attachment ?

Separate one-way analyses of variance were performed on the prenatal and 13-month total life events scores by attachment classification (A, B, C). No significant differences in prenatal life events scores were found by attachment classification. However at 13 months mothers of anxious-resistant (C) infants reported significantly higher levels of stress than mothers of anxious-avoidant (A) or secure (B) infants ($F = 3.43$, $p < .04$). To investigate the effect of changes in life stress on attachment, a repeated measures MANOVA was performed on prenatal and 13 month stress scores by attachment classification using change in score as the

within-subjects factor. There was a significant difference in the life stress change score from the prenatal to the 13 month assessment by attachment classification (F = 3.73, $p < .03$). Follow-up tests revealed that only the mothers of C infants who showed significant increases in life events scores over time ($F = 5.76$, $p < .04$).

Insert Figure 1 about here

What particular types of stress have the strongest relation to quality of attachment?

Separate one-way analyses of variance were done using attachment classification as the independent variable and individual life stress factors as the dependent variables. Of the prenatal life stress factors, only family death ($F = 8.08$, $p < .001$) differed significantly by attachment. Follow-up t-tests indicated that mothers of A's reported significantly more stress related to family deaths than mothers of B's. At 13 months there were significant differences by attachment for stress related to changes in family relationships ($F = 4.11$, $p < .02$), partner related stress ($F = 3.81$, $p < .02$), and family suicide stress ($F = 4.06$, $p < .02$). Separate follow-up t-tests indicated that mothers of C's reported significantly more of these stressors than mothers of B's.

Insert Figure 2 about here

Does social support moderate the relationship between stress and quality of attachment?

Social support scores were dichotomized into low and high based on the median. Separate one-way analyses of variance were done for high and low social support, using attachment classification as the independent variable and 13-month life stress as the dependent variable. For mothers who reported high social support there were no significant differences in stress by attachment. For mothers who reported low social support there were significant differences in stress by attachment. Mothers of C's who reported low social support also reported significantly more life stress than mothers of A's or B's. This result was obtained for all social support categories, including community ($F = 3.24$, $p < .04$), friendship (F = 3.94, $p < .02$), intimate ($F = 4.25$, $p < .02$), satisfaction with ($F = 4.18$, $p < .02$), and overall support ($F = 3.42$, $p < .04$).

Insert Figure 3 about here

DISCUSSION

Our data illustrate the relationship between maternal life stress, changes in life stress, particular types of stress, and the interplay between stress and support, and quality of mother-infant attachment. Maternal reports of stressful life events at 13 months significantly distinguished anxious-resistant (C) infants from secure infants (B) and anxious-avoidant (A) infants. In addition to reporting higher overall levels of stress at 13 months, mothers of C infants also reported significant

increases in life stress from the prenatal to the 13 month period. Our finding extends Egeland & Farber's (1984) finding that mothers of C girls reported more stressful life events, and supports Vaughn et al.'s (1979) finding that changes in stress are related to changes in attachment.

However not all types of stressors relate equally strongly to quality of attachment. Only certain types of stress, including stress related to death, changes in family relationships, and partner relationships, were reported significantly more by mothers of anxiously attached infants. Stress surrounding a mother's close interpersonal relationships appears to be particularly salient. This type of stress is likely to present competing demands for a mother's time and absorb much of her emotional energy, so that she is unable to be consistently available and responsive to her infant's needs and foster secure attachment. Previous research has demonstrated that stressed mothers are less likely to be responsive to their infant's cues (Crnic, Greenberg, Ragozin, Robinson, & Basham, 1983).

High relationship stress does seem to have more of an effect on the development of resistant (C) rather than avoidant (A) attachment. The one exception to this is that A mothers more often experienced the death of a loved one during the prenatal period. Profiles of A versus C mothers may help explain these findings. A mothers tend to be disinterested in their infants and in parenting. The mothers in our sample who experienced death during the prenatal period may have been mourning their loss during the first year of the infant's life. Therefore they may have been uninterested in and unavailable to their infant during this crucial period, making the formation of an A attachment more likely.

Mothers of C infants often have the desire to be good mothers but lack the necessary caretaking skills. Furthermore, C infants may be less easy to care for and require more sensitive care (Egeland & Farber, 1984). High levels of relationship stress in the year following birth, perhaps coupled with the stress of having an irritable baby, may have taxed some mothers' already limited capacity for providing consistent sensitive and responsive care, making the formation of a C attachment more likely.

Yet if these vulnerable and highly stressed mothers also experienced high levels of social support, their infants were less likely to be anxiously attached. It is illustrative that of our C mothers who reported high stress, 6 experienced low social support, and only 1 reported high social support. Therefore the presence of social support seems to moderate the effect of life stress on attachment for C mothers. Interestingly enough, there was no moderator effect found for B mothers; neither stress nor support seemed to contribute to the development of secure attachment. A combination of poor parenting skills, high maternal stress (particularly relationship stress), and low social support, may make the mother and infant more susceptible to forming an insecure-resistant attachment.

Figure 1. Differences in Prenatal and 13-Month Maternal Stress by Attachment Classification

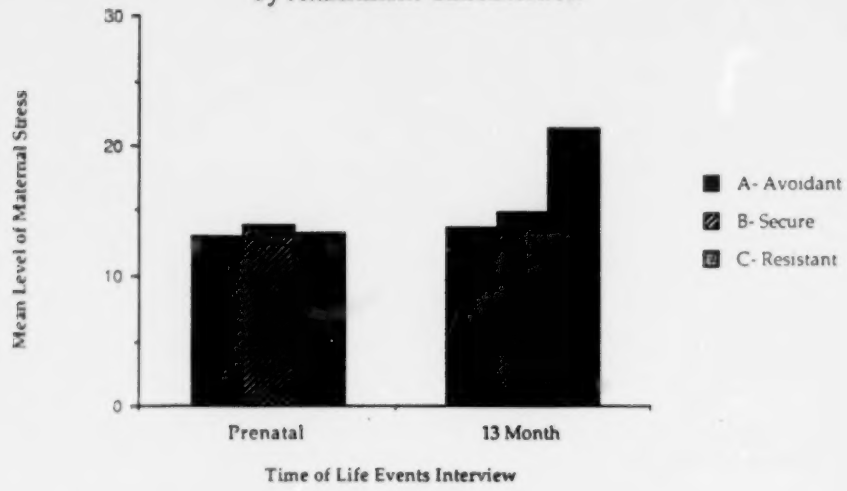


Figure 2. Significant Differences in Life Events Factor Scores by Attachment Classification

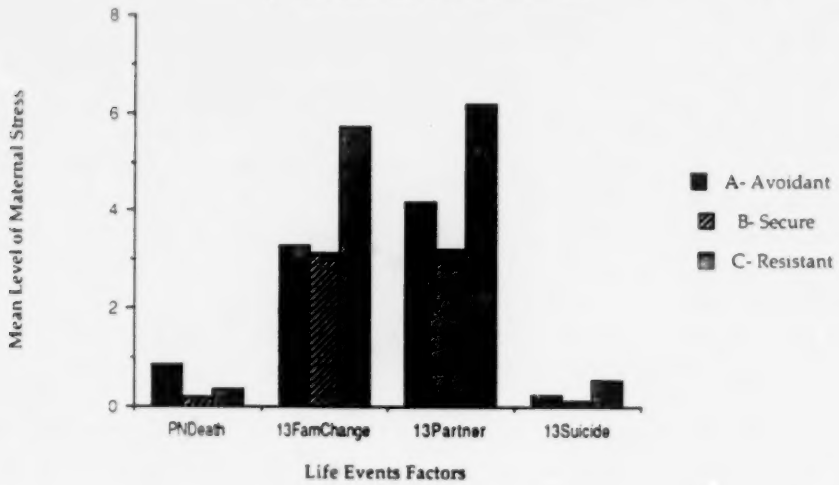
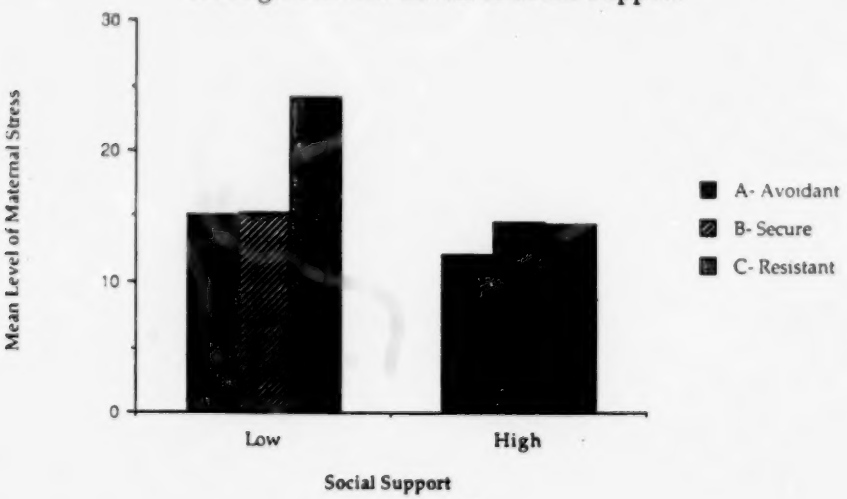


Figure 3. Differences in Maternal Stress by Attachment Classification for High and Low Levels of Social Support



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